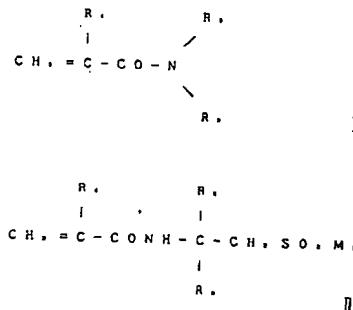


- (54) **ADMIXTURE FOR EXTRUSION-MOLDING ASBESTOS-FREE CEMENT**  
 (11) 4-182333 (A) (43) 29.6.1992 (19) JP  
 (21) Appl. No. 2-309101 (22) 14.11.1990  
 (71) TOKUJI KOGYO SEIYAKU CO LTD (72) TADA AKI SHIMOMURA(1)  
 (51) Int. Cl. C04B14/46, C04B16/02, C04B24/26, C04B28/02// (C04B28/02, C04B14/46,  
 C04B16/02, C04B24/26)

**PURPOSE:** To attain surface smoothness of a molded article and to exhibit an excellent extrusion-molding function by using an admixture for extrusion-molding asbestos-free cement consisting of specified acrylic polymer and cellulose derivative.

**CONSTITUTION:** From 99.9 to 30mol% of a compd. shown by formula I ( $R_1$  is H or  $CH_3$ , and  $R_2$  and  $R_3$  are H or lower alkyls) and 0.1-70mol% of a compd. shown by formula II ( $R_4$  is H or  $CH_3$ ,  $R_5$  and  $R_6$  are H or lower alkyls, and  $M_1$  is H, alkali or  $NH_4$ ) are copolymerized, and 5-50wt.% of a water-soluble or dispersible acrylic polymer with the viscosity of its 0.2% soln. in 4% aq.  $NaCl$  soln. at 25°C measured by a rotational viscometer controlled to 1.15cp and 95-50wt.% of a water-soluble or dispersible cellulose derivative (e.g. alkylcellulose) are added to the copolymer to obtain the admixture.



**(54) SELF-HARDENING FILLING-BACK MATERIAL**

- (11) 4-182334 (A) (43) 29.6.1992 (19) JP  
 (1) Appl. No. 2-311398 (22) 19.11.1990  
 (1) TOKYU CONSTR CO LTD (72) SHINICHI TAMAI(5)  
 (51) Int. Cl. C04B18/08, C04B24/16, C04B28/02// (C04B28/02, C04B18/08, C04B24/16)

**PURPOSE:** To improve fillability, corrosion resistance and suitability to re-excavation by mixing fly ash, clinker ash, cement, a thickener and a foaming agent with water.

**CONSTITUTION:** Water is mixed with a foaming agent such as sulfuric ester of higher alcohol and further mixed with a thickener such as a cellulose ester-based thickener, cement such as common Portland cement, fly ash and clinker ash to obtain the title material having  $\geq 30$ cm table flow value stipulated by JIS.

**(54) PRODUCTION OF SELF-HARDENING FILLING-BACK MATERIAL**

- (11) 4-182335 (A) (43) 29.6.1992 (19) JP  
 (21) Appl. No. 2-311399 (22) 19.11.1990  
 (71) TOKYU CONSTR CO LTD (72) SHINICHI TAMAI(5)  
 (51) Int. Cl. C04B18/08, C04B24/16, C04B28/02// (C04B28/02, C04B18/08, C04B24/16)

**PURPOSE:** To improve flowability, corrosion resistance and suitability to re-excavation by mixing water with a foaming agent and further mixing the mixture with a thickener, cement, fly ash and clinker ash.

**CONSTITUTION:** Water is mixed with a foaming agent such as sulfuric ester of higher alcohol and further mixed with a thickener such as a cellulose ester-based thickener, cement such as common Portland cement, fly ash and clinker ash to obtain a self-hardening filling-back material having  $\geq 30$ cm table flow value stipulated by JIS.